

## CLAIMS

1. A reagent for amplifying the amyloid fibrosis of amyloid  $\beta$ -protein, which comprises a peptide consisting of 14 to 23 residues of amyloid  $\beta$ -peptide [hereinafter, abbreviated as A $\beta$  (14-23)] or a peptide derived from the peptide by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu.
2. The reagent according to claim 1, wherein the peptide derived from A $\beta$  (14-23) by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu is further subjected to substitution of one or more hydrophobic residues in the peptide chain by other hydrophobic amino acid residues..
3. The reagent according to claim 1, wherein the peptide derived from A $\beta$  (14-23) by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu is further subjected to substitution of all hydrophobic residues in the peptide chain with Leu or to substitution of all hydrophobic residues in the peptide chain, except for Phe at the position 3 or 4 from the N-terminal side of a hydrophobic site, with Leu, or to substitution of the position 3 from the N-terminal side of the hydrophobic site with Ala and all of the remaining hydrophobic residues with Leu.
4. A method of amplifying the amyloid fibrosis of amyloid

$\beta$ -protein, which comprises using a reagent containing a peptide [A $\beta$  (14-23)] consisting of 14 to 23 residues of amyloid  $\beta$ -peptide or a peptide derived from the peptide by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu.

5. The method according to claim 4, wherein the peptide derived from A $\beta$  (14-23) by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu is further subjected to substitution of one or more hydrophobic residues in the peptide chain with other hydrophobic amino acid residues.

6. The method according to claim 4, wherein the peptide derived from A $\beta$  (14-23) by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu is further subjected to substitution of all hydrophobic residues in the peptide chain with Leu or to substitution of all hydrophobic residues in the peptide chain, except for Phe at the position 3 or 4 from the N-terminal side of a hydrophobic site, by Leu, or to substitution of the position 3 from the N-terminal side of the hydrophobic site with Ala and all of the remaining hydrophobic residues with Leu.

7. A reagent for detection of disease attributable to amyloidosis, which comprises a peptide [A $\beta$  (14-23)] consisting of 14 to 23 residues of amyloid  $\beta$ -peptide or a peptide derived

from the peptide by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu.

8. The detection reagent according to claim 7, wherein the peptide derived from A $\beta$  (14-23) by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu is further subjected to substitution of one or more hydrophobic residues in the peptide chain with other hydrophobic amino acid residues.

9. The detection reagent according to claim 7, wherein the peptide derived from A $\beta$  (14-23) by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu is further subjected to substitution of all hydrophobic residues in the peptide chain with Leu or to substitution of all hydrophobic residues in the peptide chain, except for Phe at the position 3 or 4 from the N-terminal side of a hydrophobic site, with Leu, or to substitution of the position 3 from the N-terminal side of the hydrophobic site with Ala and all of the remaining hydrophobic residues with Leu.

10. The detection reagent according to any one of claims 7 to 9, wherein the disease attributable to amyloidosis is Alzheimer's disease.

11. A method of detecting disease attributable to amyloidosis,

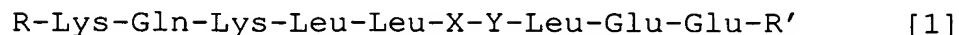
which comprises using a reagent containing a peptide [ $A\beta$  (14-23)] consisting of 14 to 23 residues of amyloid  $\beta$ -peptide or a peptide derived from the peptide by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu.

12. The detection method according to claim 11, wherein the peptide derived from  $A\beta$  (14-23) by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu is further subjected to substitution of one or more hydrophobic residues in the peptide chain by other hydrophobic amino acid residues.

13. The detection method according to claim 11, wherein the peptide derived from  $A\beta$  (14-23) by substituting all positively charged side-chain amino acids thereof with Lys and simultaneously substituting all negatively charged side-chain amino acids thereof with Glu is further subjected to substitution of all hydrophobic residues in the peptide chain with Leu or to substitution of all hydrophobic residues in the peptide chain, except for Phe at the position 3 or 4 from the N-terminal side of a hydrophobic site, with Leu, or to substitution of the position 3 from the N-terminal side of the hydrophobic site with Ala and all of the remaining hydrophobic residues with Leu.

14. The detection method according to any one of claims 11 to 13, wherein the disease attributable to amyloidosis is Alzheimer's disease.

15. A peptide represented by the following general formula [1]:



wherein R represents a hydrogen atom or an amino-protecting group, X represents Leu, Phe or Ala, Y represents Leu or Phe, and R' represents OH or NH<sub>2</sub>.

16. The peptide according to claim 15, which is represented by the formula: R-Lys-Gln-Lys-Leu-Leu-Leu-Leu-Leu-Glu-Glu-R' wherein R and R' have the same meanings as defined above.

17. The peptide according to claim 15, which is represented by the formula: R-Lys-Gln-Lys-Leu-Leu-Leu-Phe-Leu-Glu-Glu-R' wherein R and R' have the same meanings as defined above.

18. The peptide according to claim 15, which is represented by the formula: R-Lys-Gln-Lys-Leu-Leu-Phe-Leu-Leu-Glu-Glu-R' wherein R and R' have the same meanings as defined above.

19. The peptide according to claim 15, which is represented by the formula: R-Lys-Gln-Lys-Leu-Leu-Ala-Leu-Leu-Glu-Glu-R' wherein R and R' have the same meanings as defined above.